NOV 24 '58

HIGHER EDUCATION

MONTHLY PUBLICATION OF THE U. S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
Office of Education, Higher Education Division

VOL. XV, NO. 3 WASHINGTON, D. C. NOVEMBER 1958

Recent Practices Relating to Faculty in Institutions of Higher Education: Preliminary Report

*By CLARENCE B. LINDQUIST

ROOM 223

IN RECENT YEARS there has been much discussion about growing faculty shortages caused by expanding college enrollments and the increased demands for highly trained manpower, especially in certain fields. National committees and commissions, such as the President's Committee on Education Beyond the High School and the Educational Policies Commission of the National Education Association, have predicted that the situation will become critical in the years ahead.[1]

Background of the study

To determine how widely certain personnel and instructional practices were being used and the extent to which they were related to faculty shortages, the Office of Education sent a questionnaire to the presidents of all institutions of higher education in the continental United States and its outlying parts during the latter part of May 1958. This article presents a preliminary report on the findings of the survey.

The Office recognized that a college or university faced with serious staffing problems might employ a number of personnel and instructional practices to cope with them. It realized, however, that an institution might follow such practices for other reasons, for example, in the belief that they were good administrative practices or that they were worthwhile educational experiments. The Office therefore considered it desirable in designing the questionnaire for the study, not only to determine what practices were being followed during the year July 1957—June 1958 but also to compare their use or non-use with an earlier base period. For this purpose the period July 1954 to June 1957 was chosen, since the recent increases in enrollment were beginning to be felt about that time.

Twelve personnel and nine instructional practices were listed in the questionnaire, with space provided for inclusion of additional ones as desired. Among the specified practices, all of which are listed on tables 2 and 3, were employment of retired professors and other retired persons, employment of

IN THIS ISSUE

	Page
Recent Practices Relating to Faculty	41
Administration of National Defense Act of 1958	47
Offerings in Highway Safety and Traffic	47
Institutional Graduate Fellowship Program	48
Florida Starts Construction	54
Instructor Training Program at Newark	55
New Publications	55

*Chief, Natural Sciences and Mathematics, Division of Higher Education, Office of Education.

[1] The President's Committee on Education Beyond the High School, *Second Report to the President*, Washington, D. C., U. S. Government Printing Office, July 1957, p. 5; and Educational Policies Commission, *Higher Education in a Decade of Decision*, Washington, D. C., National Education Association, 1957, p. 78.

484992—58

new faculty at ranks and salaries relatively higher than formerly, establishment or extension of fringe benefits, increase in size of lecture sessions, and reduction in number of subcollegiate courses of instruction.

For the period 1954–57, respondents were asked to check whether these or other specified practices had or had not been followed, and if they had, whether (1) primarily because of faculty shortage, (2) primarily because of other reasons, or (3) equally because of faculty shortage and other reasons. Respondents were asked to indicate whether, during the period 1957–58, and for any of the three reasons just mentioned, these practices had been followed or their previous use discontinued, or whether they had been continued to the same extent as before. They were also asked to indicate whether, during that period, the practices had been continued but reduced, introduced, or their previous use expanded. An affirmative reply was requested on a practice if it was employed in the institution as a whole or in any part of it. Thus, no attempt was made to conduct a study in depth to determine how extensively a given practice was followed in a particular institution; appropriate followup studies may be made later if these seem advisable.

The questionnaire gave each respondent an opportunity to add any comments or observations on staffing problems at his institution, methods of coping with them, and the relative effectiveness of these methods. As shown later, many respondents availed themselves of this opportunity.

Rate of Response

Usable returns from 1,557 colleges and universities were received in time to be included in this preliminary report. This number represents a response rate of 80.2 percent; the enrollment in these institutions constitutes 92.3 percent of the total fall opening enrollment in 1957. Table 1 gives a breakdown of the response rate by type of institution.

The highest rate of return was obtained from universities with a 94.4 percent response. The lowest rate of response came from theological schools with 56.1 percent. Many of the heads of theological schools as well as those of numerous professional schools replied that, because of the specialized character of their institutions, the survey did not apply to them. For example, some seminaries reported that their faculties were assigned by a religious order, served without salary, and their enrollments were limited. Some professional schools, such as art and music conservatories, reported that the faculty was part time and served on a fee basis.

Table 1.—Response rate by type of institution

Type of institution	Total number in type	Number of responses	Percent of response
All institutions	1,940	1,557	80.2
Universities	141	133	94.4
Liberal arts colleges	732	651	89.0
Teachers colleges	199	168	84.4
Professional and technological schools	177	124	70.1
Theological schools	148	83	56.1
Junior colleges	493	362	73.4
Technical and semi-professional schools	50	36	72.0

Extent of Use of Practices

Table 2, Extent of use of various faculty and instructional practices in institutions of higher education, gives for each of the 21 practices listed in the questionnaire the number of institutions which reported on that practice and the number and percent of the reporting institutions which followed the practice. This table also gives the number and percent of the reporting institutions following each practice in 1954–57 and continuing but not increasing it in 1957–58, (1) due primarily to faculty shortage, (2) due equally to faculty shortage and other reasons, and (3) due primarily to other reasons. In addition, this table shows the number and percent of reporting institutions introducing or increasing previous use of each practice in 1957–58 due to the same reasons.

The most frequent practice, reported by 84.5 percent of the institutions, was that of granting salary increases of at least 5 percent per annum for the faculty as a whole during the past 4 years. A total of 43.8 percent of the institutions reporting on this practice stated, however, that they had adopted it for reasons other than faculty shortage. Many of the respondents stated that they had granted salary increases in fairness to their faculties because of the general rise in the cost of living during the past years. New fringe benefits were established or existing ones increased by 61.0 percent of the reporting institutions. This, too, was done more for the welfare of faculties and to put teaching on a basis comparable

to that of other occupations than because of faculty shortages.

Almost two-thirds or 65.7 percent of the institutions reported that they employed part-time persons whose incomes were mainly from other occupations, and a total of 909 or 62.8 percent indicated that, for the same ranks as before, they had employed new faculty members at salaries relatively higher than those formerly given for similar training and experience. Shortages, at least in some fields, apparently are making it necessary for colleges and universities to offer attractive inducements to draw new faculty to their staffs. Only 306 or 22.4 percent attempted to "buy in" new faculty at ranks relatively higher than before for equivalent training and experience but without raising salaries. However, 430 or 31.7 percent employed new faculty at both salaries and ranks relatively higher than formerly.

More than one-fourth reported that primarily because of faculty shortages they had accelerated promotion of their faculty compared to the promotion policy in effect prior to the period covered by this study. Over 40 percent were employing professors retired from other institutions, retired military officers, or persons retired from business, industry, or government, while 36.5 percent permitted employment of faculty members beyond the mandatory retirement age. During the past 4 years a total of 120 or 9.0 percent had raised the established mandatory retirement age.

Most frequently followed practices relating to instruction were reduction in the number of duplicating and overlapping course offerings, 58.3 percent, and reduction in the number of small classes, 54.6 percent. Elimination or curtailment of some existing courses or programs of study, or cancellation or postponement of proposed new ones was checked by 47.5 percent of the institutions, and increase in the size of lecture sessions by 45.3 percent. A total of 277 or 21.1 percent said that they had reduced the number of subcollegiate courses of instruction. Only 71 institutions reported that they gave courses completely or primarily by television, and only 27 indicated that they gave the courses completely or primarily by film.

Practices Due to Shortage

Of particular interest is the extent to which institutions during the period covered by this study have followed practices because of faculty shortages. Table 3, number and percent of institutions following in 1957–58 various practices due to faculty shortage, gives for each practice the number and percent of all institutions in the study which employed it because of this reason. This table also shows the corresponding number and percent for public institutions, private institutions, and institutions of various types.

The practice most frequently checked (48.3 percent) was employment of new faculty at ranks relatively the same as before but at salaries relatively higher than those formerly given for similar training and experience. Next in order were employment of new faculty less qualified than formerly for the positions they occupy (39.4 percent) and salary increases of at least 5 percent per annum for the faculty as a whole (37.1 percent).

In comparing institutions by control, the percentage of public institutions was significantly higher than private institutions in the following practices: Employment of new faculty less qualified than formerly for the positions they occupy (48.8 percent versus 33.9 percent); accelerated promotion of faculty (18.0 percent versus 13.3 percent); increase in size of lecture sessions (37.9 percent versus 24.4 percent); reduction in the number of subcollegiate courses of instruction (12.2 percent versus 6.0 percent); and courses given completely or primarily by television (2.1 percent versus 0.6 percent). Private institutions were significantly higher in the following practices employed to alleviate faculty shortages: Sharing instructors and instructional facilities with other institutions (18.3 percent versus 9.3 percent); employment of some faculty beyond the mandatory retirement age (25.4 percent versus 16.4 percent); and new fringe benefits established or existing ones increased (24.6 percent versus 14.0 percent).

Comparisons by Types of Institutions

Comparison of institutions by type (table 3) shows that universities more than other types have employed practices more frequently due to faculty shortages in some fields. Particularly outstanding in this respect is the employment of new faculty at ranks relatively the same and at salaries relatively higher than those previously given for similar experience and training (71.5 percent). These higher percentages are undoubtedly in part attributable to the large size of these institutions and hence the greater likelihood that the practices would be followed in one or more of their schools or colleges.

Liberal arts colleges employed the following

Table 2.—Extent of use of various faculty and instructional practice in institutions of higher education

PRACTICE	Number of institutions reporting on practice	Reporting institutions following practice in 1957–58		Reporting institutions following practice in 1954–57 and continuing but not increasing it in 1957–58[3]						Reporting institutions introducing or increasing practiec in 1957–58					
				Due primarily to faculty shortage		Due equally to faculty shorage and other reasons		Due primarily to other reasons		Due primarily to faculty shortage		Due equally to faculty shortage and other reasons		Due primarily to other reasons	
		Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
1. Employment of retired professors and other retired persons	1,459	597	[2]40.9	106	7.3	118	8.1	101	6.9	105	7.2	112	7.7	55	3.8
2. Employment part-time of persons whose incomes are mainly from other occupations	1,449	952	65.7	113	7.8	155	10.7	263	18.2	93	6.4	158	10.9	170	11.7
3. Sharing instructors and instructional facilities with other institutions	1,404	517	36.8	56	4.0	51	3.6	157	11.2	45	3.2	81	5.8	127	9.0
4. Employment of new faculty less qualified than formerly for positions occupied	1,459	649	44.5	287	19.7	31	2.1	16	1.1	226	15.5	69	4.7	20	1.4
5. Employment of new faculty at salaries (ranks same) relatively higher than formerly	1,448	909	62.8	232	16.0	101	7.0	62	4.3	213	14.7	206	14.2	95	6.6
6. Employment of new faculty at ranks (salaries same) relatively higher than formerly	1,366	306	22.4	72	5.3	26	1.9	19	1.4	108	7.9	52	3.8	29	2.1
7. Employment of new faculty at both ranks and salaries relatively higher than formerly	1,356	430	31.7	101	7.4	44	3.2	27	2.0	135	10.0	84	6.2	39	2.9
8. Accelerated promotion of faculty	1,323	335	25.3	67	5.1	27	2.0	35	2.6	76	5.7	64	4.8	66	5.0
9. Employment of some faculty members beyond mandatory retirement age	1,403	512	36.5	115	8.2	62	4.4	84	6.0	90	6.4	77	5.5	84	6.0
10. Increase of the established mandatory age limit	1,330	120	9.0	27	2.0	4	0.3	11	0.8	34	2.6	24	1.8	20	1.5
11. New fringe benefits established or existing ones increased	1,397	852	61.0	26	1.9	60	4.3	196	14.0	40	2.9	196	14.0	334	23.9
12. Salary increases of at least 5 percent per annum for faculty as a whole	1,416	1,197	84.5	35	2.5	135	9.5	231	16.3	42	3.0	365	25.8	389	27.5
13. Increase in the size of lecture sessions	1,439	651	45.3	115	8.0	75	5.2	73	5.1	97	6.7	170	11.8	121	8.3
14. Reduction of duplicating and overlapping course offerings	1,380	805	58.3	59	4.3	84	6.1	175	12.7	48	3.5	158	11.4	281	20.4
15. A significantly larger responsibility placed on student for his own learning	1,367	500	36.6	24	1.8	32	2.3	89	6.5	20	1.5	116	8.5	219	16.0
16. Use of non-professional assistants to help relieve faculty of nonteaching duties	1,401	488	34.8	48	3.4	43	3.1	92	6.6	54	3.8	142	10.1	109	7.8
17. Reduction in number of smaller classes	1,398	764	54.6	82	5.9	99	7.1	115	8.2	65	4.7	196	14.0	207	14.8
18. Elimination, curtailment, or postponement of some programs of study	1,413	671	47.5	69	4.9	68	4.8	117	8.3	72	5.1	155	11.0	190	13.4
19. Reduction in the number of subcollegiate courses of instruction	1,311	277	21.1	15	1.1	21	1.6	58	4.4	30	2.3	63	4.8	90	6.9
20. Courses given completely or primarily by television	1,378	71	5.2	0	0.0	5	0.4	14	1.0	2	0.1	11	0.8	39	2.8
21. Courses given completely or primarily by films	1,373	27	2.0	2	0.1	0	0.0	6	0.4	2	0.1	6	0.4	11	0.8

[1] Some practices (e. g., practices concerning ranks, mandatory retirement age, subcollegiate instruction) were not applicable to all institutions. Some forms were not fully completed. Hence, the total number of responses to various practices differs. The percentages for each practice in this table are based upon the total number of responses by institutions which have reported on each practice.

[2] Due to rounding off, the sum of the percentages in the following columns may differ slightly from the percentage in this column.

[3] Some institutions in 1957–58 decreased use of practices followed during 1957–57. However, the number of such cases is relatively small, and it is thought inadvisable in this preliminary report tc expand the tables to show them.

practices more frequently than other types of institutions: Sharing instructors and instructional facilities with other institutions (20.9 percent), and new fringe benefits established or existing ones increased (25.3 percent).

Teachers colleges used the following practices due to faculty shortages relatively more frequently than did other types of institutions: Employment of new faculty less qualified than formerly for the positions they occupy (51.2 percent); salary increases of at least 5 percent per annum for the faculty as a whole (42.8 percent); and elimination or curtailment of some existing courses or programs of study, or cancellation or postponement of proposed new ones (28.6 percent).

Professional and technological schools, theological schools, junior colleges, and technical and semi-professional schools appeared to follow the listed practices because of faculty shortages less often than do the universities, liberal arts colleges, and teachers colleges. In a number of instances, junior college presidents or deans reported that the procurement of qualified staff was no particular problem as they were easily obtainable from among the better high school teachers in the system with which they were associated.

Number of Practices Used by Individual Institutions

Of the total number of 1,557 institutions, only 237 or 15.2 percent reported that they did not follow any of the 21 listed practices because of faculty shortages, and 328 or 21.1 percent said that they had followed only one or two of the practices due to these reasons. On the other hand, 456 or almost 30 percent of the institutions indicated that, because of faculty shortages, they were employing at least seven or more of the practices. Two institutions employed as many as 17 practices.

General Comments

A total of 424 or 27.2 percent of the respondents availed themselves of the opportunity provided to add comments or observations concerning staffing problems, if any, at their institutions, methods of coping with them, and the relative effectiveness of these methods. In many respects these comments and observations constitute the most interesting aspect of this study. The full report of the study, now in preparation, analyzes them in detail.

One-hundred and twenty of the respondents said that staffing problems do not exist or that they are of no consequence at their institutions. As expected, most of the "prestige" institutions with substantial resources fall in this category.

A considerable number of institutions volunteered the information that they were experiencing serious difficulty in securing and retaining qualified faculty in certain fields of study. A total of 192 institutions reported that they were experiencing such difficulty in the fields of science, mathematics, and engineering; 18 in humanities; 23 in social sciences; and 56 in education and professional areas. Mathematics with 49 was the most frequently cited specific field of shortage, and physics was next with 37.

A dean in a liberal arts college in the Middlewest commented that whereas his institution may have about 150 candidates for positions in a department of the humanities, it has had only one good candidate for an instructorship in mathematics in the last 8 years. A dean in a Rocky Mountain public institution reported that because of shortages in certain science and mathematics areas, his institution has been compelled to set the beginning salary of such staff members as physics professors at least $1,500 higher than the salaries paid in fields such as history, art, physical education, and English. The president of a Rocky Mountain technological college bemoaned the losing battle he is facing in maintaining an adequate science and engineering faculty because every time an increase in general salary level has been achieved, industry has increased its lead even more.

Thirty-two institutions emphasized that their main staffing problem was to find money for higher salaries, while twenty-seven others said that higher salaries have been primarily responsible for preventing or alleviating staffing problems. Thirty-nine institutions indicated that staffing had become progressively more difficult in recent years, especially during the past year.

Steps frequently mentioned by respondents as having been taken by their institutions to help solve the staffing problems, include the granting of financial assistance and encouragement to faculty members to obtain higher degrees through sabbatical leaves; securing foundation support, and offering faculty fellowships; and, permitting or encouraging faculty to engage in consulting practice to supplement income. Also reported frequently was employment of more women than before and in some instances on a formerly all-male faculty; deliberate attempts to make circumstances of employment as attractive as

Table 3.—Number and percent of institutions following in 1957–58 various practices due to faculty shortage [1]

[Number of institutions by control and type in each category shown in parentheses]

PRACTICE	All institutions (1,557)		By control				By type													
			Public (572)		Private (985)		Universities (133)		Liberal arts (651)		Teachers (168)		Professional and technological (124)		Theological (83)		Junior colleges (362)		Technical and semi-professional (36)	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
1. Employment of retired professors and other retired persons	441	28.4	146	25.5	295	29.9	59	44.3	234	36.0	32	19.0	30	24.2	12	14.5	69	19.1	5	13.9
2. Employment part time of persons whose income is mainly from another occupation	519	33.3	195	34.1	324	32.9	58	43.6	252	38.7	49	29.1	33	26.6	20	24.1	96	26.5	11	30.6
3. Sharing instructors and instructional facilities with other institutions	233	15.0	53	9.3	180	18.3	14	10.5	136	20.9	13	7.7	15	12.1	3	3.6	50	13.8	2	5.6
4. Employment of new faculty less qualified than formerly for positions occupied	613	39.4	279	48.8	334	33.9	63	47.4	265	40.1	86	51.2	33	26.6	15	18.1	144	39.8	7	19.4
5. Employment of new faculty at salaries (ranks same) relatively higher than formerly	752	48.3	262	45.8	490	49.7	95	71.5	370	56.8	88	52.3	48	38.7	14	16.9	124	34.3	13	36.2
6. Employment of new faculty at ranks (salaries same) relatively higher than formerly	258	16.6	104	18.2	154	15.6	47	35.3	131	20.1	37	22.0	11	8.9	4	4.8	26	7.2	2	5.6
7. Employment of new faculty at both ranks and salaries relatively higher than formerly	364	23.4	134	23.4	230	23.4	59	44.3	190	29.2	47	28.0	21	16.9	7	8.4	33	9.1	7	19.5
8. Accelerated promotion of faculty	234	15.0	103	18.0	131	13.3	38	28.6	103	15.8	36	21.4	18	14.5	5	6.0	26	7.2	8	22.2
9. Employment of some faculty members beyond mandatory retirement age	344	22.1	94	16.4	250	25.4	43	32.3	186	28.6	29	17.3	20	16.1	11	13.3	52	14.4	3	8.3
10. Increase of the established mandatory age limit	89	5.7	39	6.8	50	5.1	5	3.8	37	5.7	15	8.9	5	4.0	1	1.2	22	6.1	4	11.1
11. New fringe benefits established or existing ones increased	322	20.7	80	14.0	242	24.6	31	23.3	165	25.3	28	16.6	20	16.1	10	12.0	63	17.4	5	13.9
12. Salary increases of at least 5 percent per annum	577	37.1	248	43.4	329	33.4	55	41.4	265	40.7	72	42.8	34	27.4	7	8.4	136	37.6	8	22.2
13. Increase in size of lecture sessions	457	29.4	217	37.9	240	24.4	64	48.1	196	30.1	77	45.8	22	17.7	18	21.7	75	20.7	5	13.9
14. Reduction of duplicating and overlapping course offerings	349	22.4	139	24.3	210	21.3	48	36.1	178	27.3	43	25.6	17	13.7	5	6.0	53	14.6	5	13.9
15. A significantly larger responsibility placed on student for his own learning	192	12.3	82	14.3	110	11.2	27	20.3	99	15.2	27	16.1	10	8.1	4	4.8	20	5.5	5	13.9
16. Use of nonprofessional assistants to help relieve faculty of nonteaching duties	287	18.5	111	19.4	176	17.9	35	26.3	145	22.3	36	21.4	17	13.7	6	6.0	39	10.8	9	25.0
17. Reduction in number of smaller classes	442	28.4	191	33.4	251	25.5	57	42.8	209	32.1	66	39.2	13	10.5	11	13.3	83	22.9	3	8.3
18. Elimination, curtailment, or postponement of some programs of study	364	23.4	153	26.8	211	21.4	35	26.3	184	28.2	48	28.6	13	10.5	10	12.0	72	19.9	2	5.6
19. Reduction in number of subcollegiate courses of instruction	129	8.3	70	12.2	59	6.0	24	18.0	57	8.8	21	12.5	6	4.8	0	0.0	21	5.8	0	0.0
20. Courses given completely or primarily by television	18	1.2	12	2.1	6	0.6	9	6.8	4	0.6	2	1.2	0	0.0	0	0.0	3	0.8	0	0.0
21. Courses given completely or primarily by films	10	0.6	5	0.9	5	0.5	2	1.5	3	0.5	1	0.6	0	0.0	1	1.2	2	0.6	1	2.8

[1] For the purpose of this table institutions which followed a practice "due equally to faculty shortage and other reasons" are considered to have followed the practice due to faculty shortage as well as those which followed the practice "due primarily to faculty shortages." The percentages in this table are based upon the total number of institutions in each category.

possible by means of liberal fringe benefits and pleasant working conditions; greater use of both graduate, and undergraduate assistants; permission for professors' wives to teach; and use of new instructional techniques and curriculum revisions.

Summary

This survey indicates the various means being used by colleges and universities to maintain qualified faculties at a time of mounting enrollments. Institutions are reacting to this situation by adopting a number of personnel and instructional practices to achieve maximum utilization of their present faculty resources and to attract additional staff members needed. The study suggests that, unless the number of persons prepared to teach at the collegiate level is increased and a greater percentage of them than at present actually enter teaching, these practices are likely to be more generally used than they are at the present time.

Administration of Higher Education Titles of National Defense Education Act of 1958

A BRANCH has been created in the Division of Higher Education to administer the four titles of the National Defense Education Act of 1958 that relate to higher education. As reported in the October number of *Higher Education*, these titles authorize student loans, national defense fellowships, counseling and guidance training institutes, and language development. Although no permanent staff has as yet been established for the branch, a task force recruited from the Division of Higher Education and elsewhere is now engaged in efforts to implement the foregoing titles. Homer D. Babbidge, Jr., Assistant to the Secretary of the Department of Health, Education, and Welfare has been detailed to the branch to assist with these operations.

The task force has been engaged in a series of discussions with representatives of institutions of higher education and other groups and organizations having an immediate interest in the act and has been devoting essentially full time to the preparation of descriptive materials, regulations, and procedures to be followed in its administration. In addition to informal consultations, there is in progress a series of conferences on the several titles mentioned. In all, hundreds of representatives of higher education have been consulted.

Attention is being given to the best methods and means of disseminating detailed information regarding the act and its administration. Two leaflets, one on the graduate fellowship program, the other on the student loan program are now available, and it is hoped that, by November, similar leaflets will be available on the language development and the counseling and guidance titles. An additional step under consideration, following the sending to presidents of colleges and universities of any and all materials as soon as they become available, is a series of regional meetings which might be held late in this calendar year. Representatives of colleges and universities and other interested agencies and organizations would be invited to these meetings to hear explanations of policies and procedures under the act and to raise any questions to which they might seek answers.

In addition the task force is giving much thought to the problem of staffing the branch and to the preparation of data in connection with requests for subsequent appropriations under the act.

As a regular feature, *Higher Education* proposes to carry notices of additional materials relating to the act—regulations, staff appointments, announcement of application deadlines, and other matters of interest.

College Offerings in Highway Safety and Traffic

A JOINT SURVEY by the Office of Education and the National Commission on Safety of the National Education Association shows that 328 colleges and universities have a total of 975 offerings for training personnel in the fields of highway safety and highway traffic. Approximately 82 percent of these offerings are regular college courses, while the remaining 18 percent are short courses or other irregular offerings.

Of the 975 offerings, 42 percent are in education—traffic safety and driver education; 35 percent are in engineering—traffic and highway engineering, planning and administration; and 10 percent in enforcement—police traffic supervision, laws and courts. Specialized offerings and motor vehicle fleet operation make up the remaining 13 percent.

Institutional Graduate Fellowship Programs

BY RICHARD C. MATTINGLY*

DURING WORLD WAR II it became evident that in some specialized fields there were shortages of professional and scientific personnel. The Korean conflict further emphasized these shortages, and since that time studies of the problem have indicated that the number needed in such fields as medicine, teacher education, and the sciences is far greater than the number in training. The chief sources of supply of these specialists are the institutions of higher education, both undergraduate and graduate.

Unfortunately, from the viewpoint of the institutions, government and industry took not only the graduating students but also many of their teachers. At present there is a critical shortage of specialists in certain fields, especially of college teachers to instruct the future specialists.

Previous Office Studies

Because one of the most effective ways of meeting the shortage is to encourage superior undergraduate students to continue their studies through a program of financial assistance, fellowships, loans, and employment, the Office of Education has made several studies of these forms of encouragement, the latest for the academic year 1955–56. Directories of student financial aid based on the data were published in September, 1957.[1] The data for this article are taken in part from *Financial Aid for College Students: Graduate*, and in part from other data in the 1956–57 study to be published within the next year.

In the 1956–57 study of institutional financial aid for college students, undergraduate and graduate, questionnaire returns were received from 1,471 colleges and universities. Of this group 318 higher institutions granted graduate fellowships. They enrolled over 80 percent of all graduate students in the United States. A few of these institutions did not enroll graduate students but granted fellowships to their seniors to undertake graduate work in other institutions. Several others had graduate schools or departments but granted fellowships for advanced study at other institutions in fields of study they did not offer.

Definition of a Fellowship

What is a fellowship? For the purposes of this study a fellowship is defined as a grant, grant-in-aid, fee or tuition waiver, remission or rebate awarded to a *graduate student*, for which no work, service, or repayment is expected and funds for which pass through the financial accounts of the institution. Institutions were asked, in filling out the questionnaire, to omit data on fellowships received directly by students from State or Federal agencies such as the U. S. Public Health Service, National Science Foundation, or Veterans Administration.

There have been other studies of graduate financial aid during the past several years. For example, a study was made by the National Science Foundation.[2] It is difficult to compare data from it and the present study because of a difference in the definition of a "fellowship," the method of collecting the data, the number and type of institutions from which information was gathered, and the different years for which the data were assembled. Uniform definitions of the terms used in student financial aid programs have not yet been adopted.

Increase in the amount of graduate student aid and in the number of students assisted is shown by a comparison of a 1949–50 study [3] with the present one. The earlier report indicates that in the 1949–50 academic year 265 institutions awarded 13,659 graduate fellowships having a total value of approximately $9.3 million. The present study indicates that in the 1955–56 academic year 318 institutions reported that

*Research Assistant, Division of Higher Education, Office of Education.

[1] Richard C. Mattingly, *Financial Aid for College Students: Graduate.* Office of Education Bulletin 1957, No. 17; Washington, U. S. Government Printing Office, 1957. See also Theresa Birch Wilkins, *Financial Aid for College Students: Undergraduate*, Office of Education Bulletin 1957, No. 18; Washington, U. S. Government Printing Office, 1957.

[2] National Science Foundation, *Graduate Student Enrollment and Support in American Universities and Colleges, 1954.* Washington, U. S. Government Printing Office, 1957.

[3] Theresa Birch Wilkins, *Scholarships and Fellowships Available at Institutions of Higher Education.* Office of Education Bulletin 1951, No. 16; Washington, U. S. Government Printing Office, 1951.

they awarded 24,277 fellowships having a total value of slightly more than $17.8 million. Within the period covered, the number of institutions which reported awarding fellowships increased 20 percent, the number of fellowships 78 percent, the total amount of money awarded 91 percent, and the average size of the stipend almost 9 percent.

Institutions Awarding Fellowships

What types of higher institutions awarded fellowships? As table I reveals, the largest single group of institutions were the private liberal arts colleges. However, they gave only 10.3 percent of the fellowships. The second largest group of institutions were the public universities which gave 35.4 percent of the 24,277 fellowships.

Because it was believed that a relatively small number of institutions granted the bulk of the fellowships, the institutions were ranked according to the amount of money granted for fellowships and the first 50 were classified according to the type of institution. From a comparison of tables I and II it is evident that while 103 liberal arts colleges awarded fellowships, only 3 of them ranked among the 50 largest in fellowship funds expended for graduate students.

The importance of this group of 50 institutions (listed in table III) in volume of graduate work subsidized by awards is emphasized by several facts. First, while they constitute only 16 percent of the institutions which awarded fellowships, they made 71 percent of the total number of awards; these

Table 1.—Institutions awarding fellowships by control and type of institution

Type institution	Public institutions		Private institutions		All institutions	
	Total number	Number awarding fellowships	Total number	Number awarding fellowships	Total number	Number awarding fellowships
Universities	80	73	59	57	139	130
Liberal arts colleges	76	17	568	86	644	103
Independent professional schools:						
Teachers colleges	151	12	18	3	169	15
Technological schools	15	6	21	16	36	22
Theological schools	0	0	83	28	83	28
Other professional schools	9	4	76	16	85	20
Total	331	112	825	206	1,156	318

Table 2.—Fifty institutions listed by type and control and by amount of funds expended for fellowships

Type institution	Public institutions		Private institutions		Total institutions	
	Number	Amount	Number	Amount	Number	Amount
Universities	17	$5,339,400	24	$6,975,700	41	$12,315,100
Liberal arts colleges	1	101,400	2	202,500	3	303,900
Independent professional schools:						
Teachers colleges	0	0	0	0	0	0
Technological schools	0	0	4	1,231,700	4	1,231,700
Theological schools	0	0	2	221,400	2	221,400
Other professional schools	0	0	0	0	0	0
Total	18	$5,440,800	32	$8,631,300	50	$14,072,100

Table 3.—Fifty institutions ranked in the order of total amount of fellowship awards, together with the number of grants and the mean size of the award

Institution	Total amount awarded	Number of fellowships	Mean fellowship
University of Minnesota [a]	$1,588,100	826	$1,923
University of Chicago	855,200	1,280	668
Harvard University	714,800	657	1,088
University of Michigan	676,500	804	841
Columbia University	567,000	1,117	508
Yale University	545,100	505	1,079
Massachusetts Institute of Technology	532,700	700	761
University of Wisconsin	495,400	1,219	406
University of Notre Dame	472,400	275	1,718
Johns Hopkins University	374,100	458	817
Princeton University	363,200	255	1,424
Boston University	312,800	578	541
State University of Iowa	311,200	1,366	228
University of California: all campuses	296,300	284	1,043
Cornell University	292,200	177	1,651
Stanford University	280,300	285	984
University of Illinois	279,600	222	1,246
California Institute of Technology	268,400	285	942
University of Rochester	266,900	217	1,230
University of Pennsylvania	244,300	254	962
University of Cincinnati	236,300	208	1,136
University of Southern California	227,500	269	846
Ohio State University	218,600	162	1,288
Rensselaer Polytechnic Institute	215,400	257	838
Carnegie Institute of Technology	215,200	117	1,840
University of Delaware	208,200	118	1,755
University of Florida	196,000	273	718
Rutgers University	187,900	98	1,917
Northwestern University	180,200	285	632
Tulane University	172,700	335	516
New York University	170,200	288	591
University of Texas	166,400	292	570
University of Kansas	147,000	127	1,159
Fordham University	128,000	165	776
Catholic University of America	125,300	261	480
St. Louis University	122,400	280	437
Union Theological Seminary	122,000	80	1,525
Brown University	119,100	95	1,254
University of North Carolina	116,300	72	1,615
University of Nebraska	113,400	98	1,157
Colorado State University	103,500	78	1,326
Hunter College	101,400	313	324
University of Pittsburgh	100,600	697	144
Jewish Theological Seminary of America	99,400	119	835
University of Detroit	$96,100	70	$1,251
Agricultural & Mechanical College of Texas	95,000	63	1,508
Indiana University	91,400	76	1,203
Vanderbilt University	89,200	116	769
Emory University	87,300	99	882
Bryn Mawr College	83,400	67	1,245
Total	$14,072,100	17,342	[b] $811

[a] Includes 542 fellowships (total value $1,138,200) awarded by the Mayo Foundation of Medical Education and Research, Rochester.

[b] Average.

represented 79 percent of the total amount of fellowship money granted. Furthermore, though approximately 500 institutions granted graduate degrees in 1955–56, these 50 institutions awarded over 40 percent of the master's or second professional degrees and almost 70 percent of the doctorates in that year. Finally, they enrolled 56 per cent of the total number of fulltime graduate students.

Sources of Income for Fellowship Grants

Where did the 318 institutions find funds to support graduate fellowships? Institutions were asked to report the sources of funds (1) for scholarships, (2) for fellowships, or (3) for either scholarships or fellowships since some funds may be used for the support of either group. Table IV summarizes the data of those institutions which reported the sources of funds for their fellowships only.

The reports showed a wide variation in the percentage of the funds that institutions transferred from their general operating funds for the support of their fellowships. For example, public teachers colleges had available $53,500, 80 percent of which was transferred from general funds; and private liberal arts colleges had $1,013,000, 51 percent of which came from general funds. At the other extreme, theological schools had $293,300 available, of which only 2.3 percent was transferred from general funds. An important question which institutions will face over the next few years as they experience the pressure of larger enrollments

of graduate students, will be whether the practice of giving financial support to fellowship students from general funds should be continued, or whether other sources of fellowship support should be sought.

Table IV.—Sources of funds for fellowship awards

Funds	Public	Private	Total
Restricted funds:	*Percent*	*Percent*	*Percent*
Endowment income	7.1	19.3	15.1
Government grants	11.3	6.4	8.1
Other sources	15.9	16.6	16.4
Unrestricted funds	14.6	18.9	17.4
Transfers from general funds	51.1	38.8	43.0
Total percent	100.0	100.0	100.0
Total amount	$6,386,100	$12,128,700	$18,514,800

Ratio of Fellowships to Full-Time Enrollment

The ratio between fellowships awarded and the number of full-time graduate students indicates the extent to which institutions support graduate training. Data on full-time graduate students were reported by 294 of the 318 institutions which made fellowship awards.

As can be seen from table V a large number of graduate schools with small full-time enrollment grant fellowships. Over 50 percent of the institutions reporting had less than 100 full-time graduate students and many gave fellowships to part-time as well as full-time students which accounts for the 38 institutions mentioned in note "a". It would seem that it is easier to get a fellowship at a school where the enrollment is less than 100 graduate students and most difficult when the enrollment is between 400–600. The reports showed that the more valuable grants were found at the larger graduate schools.

Size of Stipend

The monetary value of fellowship grants varies widely. A limited number of fellowships, less than one percent of the total number granted, had a value over $3,125 and 83 percent of these were awarded by universities. There were 228 students who received grants worth between $2,625 and $3,125. However the total number of these high value fellowships was only 432 or 1.7 percent of all those awarded. There were, at the other end of the scale, slightly over two-fifths of all stipends with a value of under $375.

There were significant differences in the size of fellowship stipends as between the public and private institutions which furnished the information for table VII. The range in value of the middle 50 percent of the awards at the private institutions was $235 to $984, the public institutions from $219 to $1,224. Some of these comparisons were lost when data from publicly and privately controlled institutions were combined for table VII.

To what extent does a fellowship adequately cover the cost of graduate study? The institutions were asked to supply information about tuition and required fees and board and room for the academic

Table V.—Distribution of institutions by number of full-time graduate students and percentage awarded fellowships

Percentage of full-time enrollment awarded fellowships	Number of institutions with full-time graduate enrollment of—							Total number of institutions
	Less than 50	50–99	100–199	200–399	400–599	600–999	1,000 or more	
Less than 10	22	7	9	16	7	13	9	83
10 to 19.9	12	7	5	10	3	6	7	50
20 to 29.9	13	4	4	5	----	----	5	31
30 to 39.9	7	2	1	5	1	3	4	23
40 to 49.9	8	4	5	2	2	----	----	21
More than 50	56	12	6	2	4	3	3	• 86
Total number of institutions	118	36	30	40	17	25	28	294
Percent of all institutions	40.1	12.3	10.2	13.6	5.8	8.5	9.5	100.0

• 38 institutions reported more fellowships than full-time graduate students.

Table VI.—Number of students receiving fellowships by size of annual stipends and type of institution

Size of grant	Universities	Liberal arts colleges	Independent professional schools				Total	Percent of fellowships
			Technological schools	Theological schools	Other professional schools	Teachers colleges		
Over $3,125	170	1	6	11	16	----	204	0.8
$2,625–$3,125	158	4	48	17	1	----	228	0.9
$2,125–$2,624	453	17	163	6	8	----	647	2.7
$1,625–$2,124	1,899	66	55	8	29	----	2,057	8.5
$1,375–$1,624	1,050	109	76	28	12	----	1,275	5.3
$1,125–$1,374	1,068	153	77	8	7	1	1,314	5.4
$875–$1,124	1,310	169	116	75	22	3	1,695	7.0
$625–$874	1,584	168	403	44	2	18	2,219	9.1
$375–$624	3,101	316	452	102	39	80	4,090	16.9
$125–$374	6,108	892	246	129	111	27	7,513	31.0
Below $125	2,279	597	44	59	13	9	3,001	12.4
Total	19,180	2,492	1,686	487	260	138	24,243	100.0
Median	$472	$307	$688	$510	$414	$478	$473	----
First quartile	$228	$132	$197	$247	$242	$361	$227	----
Third quartile	$1,126	$720	$1,138	$979	$1,396	$586	$1,075	----

year. The total amount of these expenses will be referred to as "basic institutional costs." The median institution reported basic institutional costs of $950. Of the 260 institutions which supplied data on this item 4 reported that they were under $500, 4 others reported more than $1,800. It is clear that approximately one half of the fellowships awarded paid only one half of the basic institutional costs at the median graduate school.

Twenty-five years ago Reeves and Russell wrote:

> The policy of granting a large number of small fellowships has been the cause of a refusal on the part of many of the more capable graduate students to accept the fellowships awarded to them, and, as a result, awards have been granted in far too many instances to students of comparatively mediocre abilities.[4]

Fields of Study

The study also collected information about fellowships according to the field of study of the recipient. To aid the institutions in classifying fellowship recipients, the questionnaire listed 44 major fields of study. Some of these were grouped under one of seven principal categories, that is, Biological Sciences, Foreign Languages, Medical Sciences, Physical Sciences, Religion and Social Sciences. The rest of the fields were separately listed. To make sure that no subject field was overlooked, "other" classifications were placed at the end of each major classification and a "Miscellaneous (specify)" was placed at the end of the list of fields. The net result was that over one hundred different subject fields were reported and are indexed in *Financial Aid for College Students: Graduate.*

Table VII summarizes data on the number of institutions granting fellowships in each field, the number, size, and mean amount of the grants, and the total amount of money awarded. The difference between the total number of fellowships in this table (24,277) and the total number in table VI (24,243) is the difference between the number of fellowships awarded and the number of people receiving grants, for some students received more than one grant.

There is a definite difference in the number and value of fellowships in various fields. The largest amount of funds was awarded in the field of engineering while the largest number of fellowships were awarded in the field of education and were awarded at more institutions. Education fellowships also had the lowest mean value, and fellowships in medicine had the highest mean value. Fellowships in

[4] Floyd W. Reeves and John Dale Russell, *Some University Student Problems*, The University of Chicago Survey, vol. X. Chicago, The University of Chicago Press, 1933, page 64.

Table VII.—Number and amount of fellowships awarded according to the major field of graduate study, 1955–56

Major field of study	Number of institutions which awarded fellowships	Fellowships awarded		
		Total number	Total amount	Mean grant
Agriculture	37	385	$353,060	$917
Architecture	20	81	69,435	857
BIOLOGICAL SCIENCES		(1,009)	(927,222)	(919)
Bacteriology	40	153	139,159	910
Biochemistry	36	153	189,347	1,238
Botany	36	106	77,940	735
Zoology	56	292	225,110	771
Other biological sciences	51	305	295,666	969
Education	133	2,668	1,081,355	405
Engineering	84	1,718	1,802,189	1,049
English	114	890	652,764	733
FINE ARTS		(1,064)	(555,039)	(522)
Music	63	484	232,963	481
Speech and dramatic arts	37	257	154,771	602
Other fine arts	50	323	167,305	518
FOREIGN LANGUAGES		(528)	(430,747)	(816)
Classical languages	34	108	98,026	908
French	37	119	89,563	753
German	28	81	68,219	842
Spanish	28	109	60,989	560
Other foreign languages	21	111	113,950	1,027
Forestry	12	67	64,600	964
Geography	21	104	82,710	795
Home economics	30	83	54,895	661
Journalism	17	102	49,152	482
Law	22	197	245,985	1,249
Library science	22	95	46,422	489
Mathematics	62	390	302,110	775
MEDICAL SCIENCES		(1,425)	(2,307,028)	(1,619)
Anatomy	13	44	36,411	828
Dentistry	9	66	46,414	703
Medicine	21	837	1,667,006	1,992
Nursing	12	61	40,472	663
Physiology	16	55	47,770	869
Public health	6	61	81,873	1,342
Veterinary medicine	3	8	9,200	1,150
Other medical sciences	30	293	377,882	1,290
Philosophy	48	231	198,151	858
PHYSICAL SCIENCES		(2,863)	(2,963,194)	(1,035)
Astronomy	9	70	91,606	1,309
Chemistry	117	1,544	1,759,570	1,140
Geology	57	351	255,333	727
Physics	83	698	700,298	1,003
Other physical sciences	24	200	156,387	782
Psychology	83	499	$367,605	$737
RELIGION		(1,570)	(829,089)	(528)
Religious education and Bible	20	869	531,536	612
Theology	45	701	297,553	424
SOCIAL SCIENCES		(3,391)	(2,467,429)	(728)
Anthropology	21	91	72,692	799
Business and commerce	55	543	357,277	658
Economics	72	373	320,992	861
History	96	666	538,623	809
Political science	69	340	314,083	924
Social work	31	550	408,487	743
Sociology	50	261	179,866	689
Other social sciences	23	567	275,409	486
Miscellaneous	105	4,917	2,046,069	416
Total	318	24,277	17,896,250	737

chemistry were granted by 117 institutions to 1,544 graduate students and the total volume of these grants was almost $1.8 million. Only 7 fields of study out of the 44 tabulated had higher mean stipends than in chemistry, and only in engineering was a larger total amount granted. Furthermore there were 986 doctorates granted in chemistry during the 1955–56 academic year which was over 11 percent of all the earned doctorates conferred during this time.

Summary

The institutions of higher education reported that they expended over $18 millions during the 1955–56 academic year for graduate fellowships. A large part of these funds were transferred from the general operating funds of the institutions. Of the 318 institutions which reported fellowship programs, 50 of them accounted for over 70 percent of the funds awarded. Fellowships ranged in value from $40 to over $3,125; the median value of the grant was under $500. Over 100 fields of study were reported although five fields accounted for over 30 percent of the number of fellowships granted.

Florida Starts Construction Under Expanded Higher Education Program

BY ERNEST V. HOLLIS*

IN 1954 the Florida State Board of Control for Institutions for Higher Learning appointed a council for the study of higher education in that State. A. J. Brumbaugh, a member of the council, was later appointed director of the study, and in 1956 the council made its report.[1]

Among other recommendations contained in the report was one calling for establishment of a State university in the Tampa area. It was thus in accordance with this recommendation that, on September 5, 1958, ground-breaking ceremonies were held in Tampa to mark the beginning of the first full-fledged State university to be established in the United States since World War II. Governor LeRoy Collins, speaking for the State Board of Education, the Board of Control, and the administration of the University of South Florida, described the new institution as "a university for the twentieth century." It is located 8 miles northeast of downtown Tampa on a 1,700-acre campus. The master plan for the campus is designed to provide for the educational and residential needs of at least 15,000 undergraduate, graduate, and professional school students.

The legislature has appropriated funds for the construction of five major buildings which will represent an investment of more than $8,000,000. John S. Allen, president of the University, in speaking before a conference on planning college buildings for efficient use, which was held on the day preceding the ground-breaking ceremonies, exhibited scale models of the five new buildings and explained the types of educational and architectural planning that had been combined to insure structures suitable to the educational needs of today and tomorrow.

A freshman class of 1,500 students is expected to enroll at the University of South Florida in the fall of 1960, and by 1970 it is expected that the enrollment will be between 10,000 and 15,000 students. Projections of college-age population indicate that by 1970 Florida will have three times the 45,000 college students enrolled during the school year 1955–56.

J. Broward Culpepper, executive director of the State board of control for higher education, indicated to the conference on campus planning and efficient use of educational buildings that an even more comprehensive job of educational and architectural planning is being undertaken at another new State university campus. This institution, which is expected to open its doors to students in the fall of 1964, is located at Boca Raton on the east coast of Florida between West Palm Beach and Miami. A third new State university which is in a still more formative stage of development is expected to open in 1968 in western Florida near Pensacola.

Public Junior College Development

The 1956 survey which made a projection of the higher education needs of Florida up to 1970 recommended the establishment of 15 or more community junior colleges. The need for these institutions has been grouped into three levels of priority. Seven locations given top priority have already established junior colleges. Indeed, two of them, Daytona Beach and Palm Beach, have established a junior college each for white students and a junior college for Negro students.

The public junior college program is being directed by James L. Wattenbarger, director, division of community colleges, State department of education. Dr. Wattenbarger and a small staff are making rapid and substantial progress in working with qualified local communities in establishing 2-year institutions by providing programs for those who wish to transfer to senior colleges, and programs for those who wish to terminate their formal education and enter the employment force after 2 years of post-high-school preparation.

Private College Development

During the 1956 study of Florida's higher education needs, the private junior and senior colleges indicated a willingness to help take care of the rising

* Director, College and University Administration Branch, Division of Higher Education, Office of Education.

[1] A. J. Brumbaugh, "A Statewide Study of Higher Education in Florida," *Higher Education*, January 1957, p. 79–81.

tide of students to the limit of their resources. Several of the private colleges have made provisions for additional enrollment in existing programs. Others have expanded programs and facilities and now provide types of education that were unavailable 5 years ago. The transformation of Jacksonville Junior College into Jacksonville University is an example of the expansion trend.

The northern and southern branches of the Presbyterian Church decided during September 1958, to establish a 4-year liberal arts college in the peninsula of Florida. After exploring a number of possibilities, a site was selected in St. Petersburg. William Kadell has been selected as president of the new institution, and he is busily engaged in recruiting a staff and developing campus and building plans. It is not known at this time when the new college will open its doors to students.

Instructor Training Program at Newark College of Engineering

To MEET the problem of a scarcity of qualified teachers, especially in a field such as engineering where high industrial salaries often lure from the classrooms men suited to the teaching field, Newark College of Engineering instituted in 1954 an Instructor Training Program which gives the student the opportunity of finding out before he finishes his formal training whether the teaching field is for him.

Under this program, the faculty of the college select potential teachers from the senior class. The students singled out are, upon graduation, given free tuition toward earning their master's degree, the title of assistant instructor with the salary of that position, and a limited teaching schedule in the day undergraduate division. A senior member of the individual department carefully instructs his new colleague in teaching methods and during the summer months the new recruit is guaranteed employment either in industry or at the college.

Thus far 13 NCE graduates have entered the program, 5 of whom have already obtained their M. S. degrees and have elected to continue their teaching careers. While it is not required by the contract, every one of the 5 who have completed the basic program has been advanced to the rank of instructor in recognition of his success in adapting to the art of teaching as well as having earned his master's degree. There has not been one fall-out since the program has gone into effect. This last point dramatically illustrates the true test of the idea's worth and the NCE administration is well pleased with the results of the program so far. It will be a few years yet before the plan's full effectiveness can be weighed, but the college believes it has found one formula at least to strengthen its faculty recruitment program.

NEW PUBLICATIONS

Government Publications

How To Obtain

(*1*) *Cost Publications: Send request, enclosing remittance (check or money order), to the Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C.*

(*2*) *Free Publications: Request direct from the agency issuing them.*

From the Office of Education

Adult Education in American Education Week, November 9–15, 1958. Facts, resources, and program ideas for local planners who wish to emphasize "Lifelong learning." Washington, U. S. Government Printing Office, 1958. Paper, 12 p. 10 cents.

Biennial Survey of Education in the United States 1954–56, Chapter 4, Section 1, *Statistics of Higher Education: 1955–56, Faculty, Students, and Degrees*, by Henry G. Badger, M. Clemens Johnson, Mabel C. Rice, and Emery M. Foster. Washington, U. S. Government Printing Office, 1958. Paper, 152 p. 60 cents.

Cooperative Research Program-Projects Under Contract, July 1, 1956–June 30, 1958. Washington 25, D. C., 1958. Processed, 24 p.

Earned Degrees Conferred by Higher Educational Institutions 1956–1957, by Diana B. Gertler *and* Virginia W. Keith, under the direction of Mabel C. Rice. Washington, U. S. Government Printing Office, 1958. Processed, 195 p. $1.50.

Education on the Aging. A Selected Annotated Bibliography, by Betty Arnett Ward, Washington, U. S. Government Printing Office, 1958. Paper, 145 p. 60 cents. (Bulletin 1958, No. 11.)

The New York Public Library
Fifth Avenue & 42nd St
New York 18 N Y
E-59
Acquisitions Branch,
Public Library Preparations Div

UNITED STATES
GOVERNMENT PRINTING OFFICE
DIVISION OF PUBLIC DOCUMENTS
WASHINGTON 25, D. C.

OFFICIAL BUSINESS

If you do not desire to continue receiving this publication, please CHECK HERE ☐; tear off this label and return it to the address at the left. Your name will then be promptly removed from the appropriate mailing list.

PENALTY FOR PRIVATE USE TO AVOID PAYMENT OF POSTAGE, $300 (GPO)

Non-Government Publications

Obtain direct from the publisher. Prices are indicated when known

Accountancy, by A. J. Penz. Cambridge 38, Mass., Bellman Co., 1958. Paper, 44 p. $1. (Vocational and Professional Monographs, No. 7.)

And Mark an Era: The Story of the Harvard Business School, by Melvin T. Copeland. Boston 6, Mass., Little, Brown and Co., 1958. 368 p. $6.

Faculty-Administration Relationships: Report of the Work Conference, May 7–9, 1957, sponsored by the Commission on Instruction and Evaluation of the American Council on Education, Frank C. Abbott, *ed.* Washington 6, D. C., American Council on Education, 1958. Paper, 88 p. $1.

The Fine and Applied Arts, by Royal Bailey Farnum. Cambridge 38, Mass., Bellman Publishing Co., 1958. Paper, 39 p. $1. (Vocational and Professional Monographs, No. 36.)

The Fund for the Republic. Two-year report by the President, May 31, 1958. 50 East 42nd St., New York 17, N. Y., the Fund, 1958. Paper, 35 p.

Going Up: Voluntary Support of America's Colleges and Universities 1956–1957. 6 East 45th St., New York 17, N. Y., Council for Financial Aid to Education, 1958. Paper, 48 p. $1.50.

Group Work in Education, by Ruth Strang. 49 East 33d St., New York, N. Y. Harper & Bros., 1958. 322 p. $5.50.

The Humanities at Oberlin: A Report by the Lilly Faculty Seminar, Oberlin College. Oberlin, Ohio. Oberlin College Department of Public Relations, 1958. Paper, 55 p.

Institute of International Education 1957, 38th Annual Report, by the President. 1530 P Street NW., Washington 5, D. C., the Institute, 1958. Paper, 61 p.

The Junior College In Minnesota, by Robert J. Keller, Harry M. Lokken, *and* Roy F. Meger. A Study prepared jointly by the Governor's Committee on Higher Education and the State Department of Education. St. Paul 1, State of Minnesota, Department of Education, 1958. Paper, 164 p.

Long-Range Planning for Education: A Report of the twenty-second educational conference, New York City, October 31 and November 1, 1957, held under the auspices of the Educational Records Bureau and the American Council on Education, Arthur E. Traxler, *ed.* Washington, 6, D. C., American Council on Education, 1958. Paper, 185 p. $2.

The Pursuit of Excellence, Education, and the Future of America. The "Rockefeller Report" on Education. Panel Report V of the Special Studies Project, Rockefeller Brothers Fund, Inc., Garden City, N. Y. Doubleday & Co., Inc., 1958. Paper, 48 p. 75 cents.

Research at Cornell, 10th Annual Report of the Vice President for Research, 1957–58. Ithaca, N. Y., Cornell University, 1958. Paper, 56 p.

HIGHER EDUCATION

Published monthly from September through May. Its printing was approved by the Bureau of the Budget on August 22, 1957, as required by Rule 42 of the Joint Committee on Printing.

EDITORIAL COMMITTEE
Jennings B. Sanders, *Chairman*
Henry H. Armsby — Sebastian V. Martorana
Robert E. Iffert — John B. Whitelaw

Publication Office: Office of Education
U. S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE • • • WASHINGTON 25, D. C.

Subscription: In advance, 75 cents a year (10 cents a single copy), to foreign countries, $1.25. For orders of 100 copies or more in bulk to one address within the United States, 25 percent discount is allowed. Send remittance to the Superintendent of Documents, Government Printing Office, Washington 25, D. C.

ARTHUR S. FLEMMING, Secretary of Health, Education, and Welfare.

LAWRENCE G. DERTHICK, Commissioner of Education.
LLOYD E. BLAUCH, Assistant Commissioner for Higher Education.

U. S. GOVERNMENT PRINTING OFFICE: 1958